PATENT
Docket No. DIAGE[illegible]00

ABSTRACT OF THE DISCLOSURE

Described are non-invasive methods of detecting the presence of specific nucleic acid sequences as well as nucleic acid modifications and alterations by analyzing urine samples for the presence of transrenal nucleic acids. More specifically, the present invention encompasses methods of detecting specific fetal nucleic acid sequences and fetal sequences that contained modified nucleotides by analyzing maternal urine for the presence of fetal nucleic acids. The invention further encompasses methods of detecting specific nucleic acid modifications for the diagnosis of diseases, such as cancer and pathogen infections, and detection of genetic predisposition to various diseases. The invention specifically encompasses methods of analyzing specific nucleic acid modifications for the monitoring of cancer treatment. The invention further encompasses methods of analyzing specific nucleic acids in urine to track the success of transplanted cells, tissues and organs. The invention also encompasses methods for evaluating the effects of environmental factors and aging on the genome.